



Patent
254/139
P00-0016

CLEAN SET OF CLAIMS

RECEIVED

FEB 15 2002

GROUP 3600

Subc, 7
BX

1. A system for processing flat media, comprising:
an indexer at a first elevation;
a docking station at a second elevation higher than the first elevation;
a transfer station adjacent to the docking station;
a process station;
and a process robot movable between the transfer station and the process station, for moving flat media between them.

2. The system of claim 1 further including a loader associated with the indexer, the loader having a load elevator for moving a closed pod of flat media between an up position, and a down position, and with the load elevator in the down position substantially aligned with the indexer at the first elevation.

3. The system of claim 2 with the loader having a loader conveyor for moving a pod from the loader onto the indexer.

4. The system of claim 1 with the indexer comprising at least one drive section having a plurality of rollers for supporting a pod, and with a drive motor linked to at least one of the rollers.

~~5.~~ The system of claim 4 where the rollers support the pod only at the outside lateral edges of the pod.

~~6.~~ The system of claim 1 where the indexer comprises a first row and second row parallel to the first row, and at least one shuttle device for moving a pod from the first row to the second row.

~~7.~~ The system of claim 6 where the shuttle device moves a pod in a direction perpendicular to the direction that the rollers move the pod.

~~8.~~ The system of claim 1 further including at least one docking station elevator for moving a pod vertically from the first elevation to the docking station at the second elevation.

9. The system of claim 1 further comprising a pod door remover at the docking station.

10. The system of claim 2 with the loader further comprising a pod rotator.

~~15. (New)~~ The system of claim 1 further comprising at least one transfer robot at the transfer station.

Sub 0.7
8

~~16.~~ (New) The system of claim 15 further comprising at least one carrier at the transfer station, with the transfer robot movable to carry a flat media article from a pod at the docking station to a carrier at the transfer station.

~~17.~~ (New) The system of claim 16 with the at least one carrier further comprising spaced apart finger slots adapted to engage with an end effector on the process robot.

~~18.~~ (New) A system for processing flat media, comprising:

- an indexer;
- a transfer station above the indexer;
- a docking station adjacent to the transfer station;
- a process station;
- a process robot movable between the transfer station and the process station, for moving flat media between them; and
- at least one docking station elevator for moving a pod vertically from the indexer to the docking station.

~~19.~~ (New) The system of claim 18 further comprising an engager plate positioned on an engager actuator supported on the docking station elevator.

~~20. (New) The system of claim 19 further comprising a docking wall at the docking station with the docking wall having at least one opening, and with the engager plate moveable towards and away from the docking wall, to dock and un-dock a pod at the docking station.~~

~~21. (New) The system of claim 18 further comprising a generally horizontal deck separating the indexer from the transfer station.~~

~~22. (New) A system for processing flat media, comprising:~~

- ~~an indexer having a first row and second row parallel to the first row, with each of the first and second rows having a plurality of pod holding positions, and at least one shuttle device for moving a pod from the first row to the second row;~~
- ~~a docking station adjacent to the transfer station with the docking station having first and second pod docking positions;~~
- ~~a first docking station elevator associated with the first row of the indexer, for moving a pod vertically between the first row of the indexer and the docking station;~~
- ~~a second docking station elevator associated with the second row of the indexer, for moving a pod vertically between the second row of the indexer and the docking station;~~
- ~~a transfer station above the indexer and adjacent to the docking station, a transfer station robot in the transfer station, and at least one carrier loading position in the transfer station, with the transfer station robot moveable to carry a flat media article from a pod at the docking station to a carrier at the transfer station;~~

at least one process station;

a process robot having an end effector for engaging and lifting the carrier at the transfer station and movable between the transfer station and the process station, for moving flat articles between them.
